REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 13-15 and 17-24 are presently active in this case. Claims 1-12 were cancelled by a preliminary amendment. The present Amendment amends Claims 13-15 and 17-24; and cancels Claim 16 without prejudice or disclaimer.

The outstanding Office Action rejected Claims 13-24 under 35 U.S.C. § 112, second paragraph, as indefinite. Claims 13, 16-18, and 24 were rejected under 35 U.S.C. § 102(b) as anticipated by Holve et al. (German Patent Publication DE 2803740, hereinafter "Holve"). Claims 13-18 were rejected under 35 U.S.C. § 102(b) as anticipated by Steiner et al. (German Patent Publication DE 2350602, hereinafter "Steiner"). Claims 19-23 were rejected under 35 U.S.C. § 103(a) as unpatentable over Steiner. Claims 19-23 were rejected under 35 U.S.C. § 103(a) as unpatentable over Steiner, in further view of Brichard et al. (U.S. Patent No. 3,921,359, hereinafter "Brichard")

Initially, Applicants respectfully request that the references AO and AP cited in the Information Disclosure Statement filed together with the Application on January 7, 2005 be acknowledged as having been considered in the next Office Action. The references were cited in a European Search Report of a European counterpart application, and the Search Report was also submitted to the U.S.P.T.O., thereby serving as a statement of relevancy.

To correct minor formalities, and to clarify certain features, to better comply with U.S. claim drafting practice and to respond to the rejection under 35 U.S.C. § 112, second paragraph, independent Claim 13 is amended. For example, instead of a "means being provided to contain the acoustic waves escaping from the at least one microcavity," now "an interior frame arranged inside the flat cavity in a periphery of the flat cavity " is recited. These features find non-limiting support in Applicants' disclosure as originally filed, for

example at p. 5, l. 32, to p. 6, l. 39, and in corresponding Fig. 1. No new matter has been added. Dependent Claims 14-15 and 17-24 are amended accordingly, without introducing any new matter.

In response to the rejections of Claims 13-24 under 35 U.S.C. §§ 102(b) and 103(a), Applicants respectfully request reconsideration of these rejections and traverse the rejections, as discussed next.

Briefly summarizing, Applicants' Claim 13 is directed to an acoustic insulating glazing unit. The glazing unit includes at least two substrate sheets, joined together around their periphery using a sealed joint/spacer frame, the sealed joint/spacer frame defining with the two substrate sheets a flat cavity that is filled with a gas, an interior frame that is arranged inside the flat cavity in a periphery of the flat cavity, ***wherein side walls of the interior frame and internal walls of the at least two substrate sheets define at least one microcavity that constitutes a zone of thermoviscous losses from the flat cavity along at least one of internal walls of the two substrate sheets***, and the dimensions of the at least one microcavity is configured to promote propagation of at least some of the acoustic waves from the flat cavity into the at least one microcavity and thereby reducing an acoustic energy of the flat cavity.

As explained in Applicants' specification starting at p. 2, l. 1, the acoustic waves become "exhausted" by friction against the interior walls of the substrate sheets and the side walls of the hollow frame, thereby causing thermovisccous losses. In other words, the acoustic wave energy is transformed into thermal energy, and therefore the overall acoustic energy in the glazing unit is reduced. These features allow a substantial improvement of the acoustic characteristics of the gazing unit. Please note that the this discussion on the advantages of Applicants' Claim 13 features is for explanatory purposes only and is not intended to limit the scope of the claims.

Turning now to the applied references, Holve describes a multilayer insulation glass with external glass layers 1, 2, having a spacer profile 3 in an edge area of the glass layers 1, 2. (Holve, Abstract.) A hollow profile 7 is arranged inside the multilayer insulation glass, and includes holes 73, 74 allowing air circulation to and from the hollow profile 7. (Holve, p. 8, ll. 8-10.) With respect to the hollow profile 7, Holve explains that holes 73, 74 are arranged on opposite sides of sidewalls, and are shifted towards each other. (Holve, p. 8, ll. 10-12.) It is thereby possible that the acoustic waves that enter the hollow profile 7 are attenuated and the acoustic energy is reduced. (Holve, p. 8, ll. 12-14.)

However, Holve fails to teach that the side walls of the interior frame and internal walls of the at least two substrate sheets define at least one microcavity that constitutes a zone of thermoviscous losses from the flat cavity along at least one of internal walls of the two substrate sheets. As discussed above, Holve clearly explains that the attenuation of the acoustic waves happens inside the hollow profile 7, and that the acoustic waves have to enter the hollow profile. In addition, as shown in Holve's Fig. 1, the distance between sidewalls of the hollow profile 7 and the inner surfaces of the glass layers 1, 2 is to big to allow the causation of thermoviscous losses to acoustic airwaves. In this respect, Holve explains at page 6, ll. 7-12, that the hollow profile needs to have sufficient distance between the side walls, and the glass layers 1, 2.

The reference Steiner, used by the pending Office Action to form a 35 U.S.C. § 102(b) rejection, also fails to teach all the features of Applicants' independent Claim 13. Steiner is directed to a multilayer insulation glass frame, having two external glass layers 1, 2, with a spacer 3 to keep the layers 1,2 at a predetermined distance. (Steiner, p. 3, ll. 26-31, Fig. 1.) Inside the glass frame, there is an u-shape profile 6 that is connected to the spacer 3, and the interior space 5 of the profile 6 is filled with acoustic-wave absorbing material. (Steiner, p. 4, ll. 12-20, Fig. 1.) The profile 6 is perforated with many holes, and interior

space 5 of profile 6, and the interior space of spacer 3 are connected by a hole 8. (Steiner, p. 4, 21-22.)

Because in an area between the profile 6 and the glass layers 1, 2 are perforated with many holes, Steiner also fails to teach that the side walls of the interior frame and internal walls of the at least two substrate sheets define at least one microcavity that constitutes a zone of thermoviscous losses from the flat cavity along at least one of internal walls of the two substrate sheets, as required by Applicants' Claim 13. In addition, in Steiner, the gap between profile 6 and glass layers 1, 2 do not have "dimensions ... is configured to promote propagation of at least some of the acoustic waves from the flat cavity into the at least one microcavity and thereby reducing an acoustic energy of the flat cavity," as further required by Applicants' Claim 13. As shown in Steiner's Fig. 1, there are multiple holes that are aligned with each other along a propagation direction of acoustic waves in the gap that is formed between profile 6 and glass layer 1, and therefore the holes in the profile, having a substantial size, will absorb all the acoustic energy into the profile 6 and the filling material 7.

The reference Brichard, used by the pending Office Action in the context of a 35 U.S.C. § 103(a) rejection, fails to remedy the deficiencies of Holve and/or Steiner, even if we assume that the combination is proper.

Birchard is directed to a multiple-pane glazing having a metal joint 26 that is soldered to the end edges 27 of sheets of glass 30, 31. (Birchard, Fig. 8, ll. 46-49.) A spacer 29 is placed between the two sheets of glass 30, 31. (Birchard, Fig. 8, ll. 50-53.) But Birchard also fails to teach that the side walls of the interior frame and internal walls of the at least two substrate sheets define at least one microcavity that constitutes a zone of thermoviscous losses from the flat cavity along at least one of internal walls of the two substrate sheets, as required by Applicants' Claim 13.

Therefore, even if the combination of the references Holve, Steiner and/or Brichard, patents is assumed to be proper, the cited passages of the combination fails to teach every element of Applicants' Claim 13. Accordingly, Applicants respectfully traverse, and requests reconsideration of these rejections based on these references.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 13-15 and 17-24 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below listed telephone number.

Respectfully submitted,

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